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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,027	02/18/2004	Lynton R. Burchette	IMG.024	2835
26984	7590	08/22/2005	EXAMINER	
WILLIAM L. LONDON 3010 LEE AVENUE P.O. BOX 152 SANFORD, NC 27330			WALSH, RYAN D	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/781,027

Applicant(s)

BURCHETTE ET AL.

Examiner

Ryan D. Walsh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

Claims 5-7 are objected to because of the following informalities: In claim 5, the "replacement electronic circuit" lacks proper antecedent basis in the claim. It should be rewritten as follows, "replacement electronic module." Claim 6 is objected to as being dependent on objected claim 5. Also, in claim 7, the "printer" lacks proper antecedent basis in the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8-11, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (US PUB 2002/0122673).

Regarding claim 1, Sakai et al. teaches, "A method of controlling toner consumption comprising: providing a toner cartridge comprising toner (8d) and electrical development components (6,7 and8); consuming a portion of said toner by printing a plurality of images; determining when a predetermined amount of the toner remains in the toner cartridge (paragraph [0068], Ln. 1-3); and when the predetermined amount of toner remains in the toner cartridge, altering the amount of toner consumed to form images by changing a voltage level applied to at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 2, Sakai et al. teaches, "wherein altering the amount of toner consumed further comprises reducing the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 3, Sakai et al. teaches, "wherein altering the amount of toner consumed further comprises increasing the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 8, Sakai et al. teaches, "A toner cartridge comprising: toner (inside of 8d); electrical development components (6,7 and 8) consuming a portion of said toner by printing a plurality of images; and an electronic circuit storing (41, and Paragraph [0067], Ln. 3-15) an indication of the amount of toner remaining, said circuit further storing a value controlling a voltage applied to the at least one of the electrical development components, said electronic circuit determining when a predetermined amount of the toner remains in the toner cartridge (paragraph [0068], Ln. 1-3), said electronic circuit altering the amount of toner consumed to form images by changing a voltage level applied to at least one of the electrical development components, when the predetermined amount of toner remains in the toner cartridge (paragraph [0068], Ln. 3)."

Regarding claim 9, Sakai et al. teaches, "wherein the electronic circuit alters the amount of toner consumed by replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value

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controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 10, Sakai et al. teaches, "wherein the electronic circuit reduces the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 11, Sakai et al. teaches, "wherein the electronic circuit increases the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 13, Sakai et al. teaches, "A toner cartridge comprising: toner (inside of 8d); electrical development components (6,7 and 8) consuming a portion of said toner by printing a plurality of images; and circuitry means (41, and Paragraph [0067], Ln. 3-15) for storing an indication of the amount of toner remaining, said circuitry means further for storing a value controlling a voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3-15), said circuitry means for determining when a predetermined amount of the toner remains in the toner cartridge (paragraph [0068], Ln. 1-3), said circuitry means for altering the amount of toner consumed to form images by changing a voltage level applied to at least one of the electrical development components, when the predetermined amount of toner remains in the toner cartridge (paragraph [0068], Ln. 1-3)."

Regarding claim 14, Sakai et al. teaches, "wherein the circuitry means is for altering the amount of toner consumed by replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 15, Sakai et al. teaches, "wherein the circuitry means is for reducing the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 16, Sakai et al. teaches, "wherein the circuitry means is for increasing the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7, 12, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (US Pub 2002/0122673) in view of Isobe et al. (US Pub 2003/0123889).

Regarding claim 4, Sakai et al. does not teach, "wherein the toner cartridge comprises an electronic module, the method further comprising, after the step of providing, the step of: replacing the electronic module with a replacement electronic module, wherein said replacement module stores an indication of the amount of toner remaining." However, wherein the toner cartridge comprises an electronic module, the method further comprising, after the step of providing, the step of: replacing the electronic module with a replacement electronic module, wherein said replacement module stores an indication of the amount of toner remaining is routine in the art as shown by Isobe et al. (see paragraph [0021], Ln. 2-4 and paragraph [0020]). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Sakai et al.'s invention to include a toner cartridge that comprises an electronic module, the method further comprising, after the step of providing, the step of: replacing the electronic module with a replacement electronic module, wherein said replacement module stores an indication of the amount of toner remaining.

The ordinary artisan would have been motivated to modify Sakai et al.'s invention in a manner described above for at least the purpose of having the ability to replenish the toner in a timely fashion.

Regarding claim 5, Sakai et al. teaches, "wherein the replacement electronic circuit stores a value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3-15)."

Regarding claim 6, Sakai et al. teaches, "wherein altering the amount of toner consumed further comprises replacing the stored value controlling the voltage applied

to the at least one of the electrical development components with a new value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 7, Sakai et al. teaches, "further comprising reading the new value by the printer (paragraphs [0048]-[0049])."

Regarding claim 12, Sakai et al. does not teach, "wherein the electronic circuit is a replacement electronic circuit replacing an original electronic circuit." However, wherein the electronic circuit is a replacement electronic circuit replacing an original electronic circuit is routine in the art as shown by Isobe et al. (see Paragraph [0021], Ln. 2-4). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Sakai et al.'s invention to include an electronic circuit that is a replacement circuit, replacing an original electronic circuit.

The ordinary artisan would have been motivated to modify Sakai et al.'s invention in a manner described above for at least the purpose of delaying developer usage to make its use more available.

Regarding claim 17, Sakai et al. teaches "toner (inside of 8d) and electrical development components (6,7 and 8) consuming a portion of said toner by printing a plurality of images, electronic circuitry (41, and paragraph [0067], Ln. 4-5) storing an indication of the amount of toner remaining, said circuit further storing a value controlling a voltage applied to the at least one of the electrical development components, said electronic circuit determining when a predetermined amount of the toner remains in the remanufactured toner cartridge (paragraph [0068], Ln. 1-3), said



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electronic circuit altering the amount of toner consumed to form images by changing a voltage level applied to at least one of the electrical development components, when the predetermined amount of toner remains in the remanufactured toner cartridge (paragraph [0068], Ln. 3).” Sakai et al. does not teach, “a replacement electronic circuit for use on a remanufactured toner cartridge.” However, a replacement electronic circuit for use on a remanufactured toner cartridge is routine in the art as shown by Isobe et al. (see paragraph [0021], Ln. 2-4). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Sakai et al.’s invention to include an electronic circuit that is a replacement circuit, for use on a remanufactured toner cartridge.

The ordinary artisan would have been motivated to modify Sakai et al.’s invention in a manner described above for at least the purpose of delaying developer usage to make its use more available.

Regarding claim 18, Sakai et al. teaches, “wherein the electronic circuitry alters the amount of toner consumed by replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3).”

Regarding claim 19, Sakai et al. teaches, “wherein the electronic circuitry reduces the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089]).”

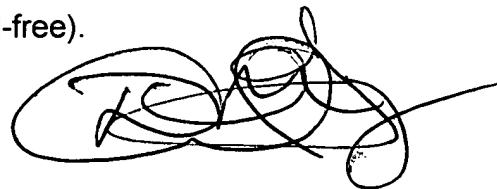
Regarding claim 20, Sakai et al. teaches, "wherein the electronic circuitry increases the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Walsh whose telephone number is 571-272-2726. The examiner can normally be reached on M-F 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'David Gray', with a long horizontal line extending to the right.

Ryan D. Walsh  
Patent Examiner  
Art Unit 2852

**David Gray**  
Primary Examiner